

THE EVOLUTION OF HOUSE-BUILDING AMONG THE NAVAJO  
INDIANS.

BY

R. W. SHUFELDT, M. D.

(With plates XLI-XLIII.)

From November, 1884, until the early spring of 1889 the writer lived at Fort Wingate, a military station in northwestern New Mexico. During the earlier part of this period there was always to be found a floating population of Navajos living on the outskirts of the fort. Including men, women, and children, these varied in number from twenty to a hundred or more, depending upon the time of the year. A few of them, however, remained the year round, and these, as well as the others, furnished ample material for the ethnological study of this interesting tribe. Accounts of many of their simple industries, of their arts and craniology have already been published by the writer, and it is now intended to give the result of my studies concerning their methods of architecture, and the influence which civilization has had upon the mind of these Indians—a contact which has led them to improve their plans of house-building, and has had the effect of bringing about an evolution of the same.

During the early part of the summer of 1885 the Indians who remained all the year round in the neighborhood of Fort Wingate took up their abode on the summit of a barren, rounded hill, situated near the officers' quarters. Here I watched them with increasing interest, as they constructed their first permanent dwellings in this part of the country. Men and women entered upon this labor, though the men did the heavier part of the work.

Having selected a site, more or less circular with a diameter something like 15 to 20 feet, they would clear it of all stone and rubbish, and often to some extent excavate it, or else improve a natural excavation which existed. Next some twenty or thirty logs, usually of pine, are brought, which vary in size from one as big as a bean pole to a piece of timber averaging 8 or 9 inches in diameter. Often these are gathered in the forest, but occasionally the Indians cut them down, using some old condemned ax they have found in the refuse of the post. Branches are also brought, and a thick, clayish mud is mixed close by the nearest running stream or spring of water. All being ready, several of the builders erect a tripod, composed of some of the stouter pieces of timber,

and slightly bury their heavier ends in the periphery of the excavation. This primary framework is now strengthened by adding to it other pieces, care being taken to leave a proper aperture for a door on the side least exposed to the prevailing winds, and an opening at the apex to allow the escape of smoke. Soon there is but little left to do, as far as the woodwork is concerned, except to fill in the interstices between the larger pieces of timber with the lighter poles.

To give the frame additional strength, pieces of rock are now placed here and there, both inside and out, at the lower ends of those pieces of timber which, from some cause or other, are the least secure, or are likely to slip. Plastering with mud is next in order, and this is thickly laid on the outside, filling in as much as possible all the spaces between the logs and poles, and piling it up all the way around the base, externally. This operation is performed with the naked hands, though occasionally a smooth piece of bark may be used in lieu of a trowel, but this is an exception. The top of the doorway is squared off with a stout stick as a crosspiece, and sometimes the chimney is finished up a little with flat stones, as may be seen in the hut in the distance in pl. XLI, and a blanket is invariably hung as a door. A few branches are now laid all over the outside, as a simple means of protection against dogs and children, who might otherwise run over the fresh mud. These are eventually blown away, or burned inside. Often an old condemned piece of canvas comes into play, being laid over the exterior as far as it will go, and admirably protecting the plaster against the elements. This finishes the construction of the primitive Navajo house, and in the spring of 1885 these Indians had advanced no further in the construction of their dwellings.

In pl. XLI a Navajo and his sister are seen in the doorway of one of the huts heretofore described, and it will be seen that the woman is dressed in a somewhat civilized costume. She is the only Navajo squaw in that part of the country that ever did so, and she both received and courted the attention of the soldiers of the garrison, and was withal a remarkable character.

During the following year some of these Navajos commenced building in a little more sheltered situation, close to but to the westward of the fort. Although they used similar materials to those mentioned in my previous description, the form of the house was by no means the same. Its sides upon the east and south were vertical; the roof was horizontal, while its side to the west was slanting. Moreover, they had gotten hold of some old pieces of stove joints and passed them to the rear outside where their free end was again turned upwards, and there plastered and stoned up as a chimney (see pl. XLII). In many particulars this house was far more comfortable and roomy, and as a study it was exceedingly interesting, for it not only showed improvement, but was remarkable, inasmuch as it combined that improvement with their pristine notions of house-building, which we see in the slanting west side of the structure. In fact it would be difficult to conceive of a

structure standing so immediately betwixt what these Indians first erected as a house and that which still remains to be described.

There are some interesting figures standing about the doorway of the house shown in the second plate. The man with his hand resting upon his left hip is "Navajo Jake," the celebrated silversmith of the tribe, whose work has formed the basis of one of the reports of the United States Bureau of Ethnology. Charlie stands with his carbine in the hollow of his arm; he is a well-known Government Navajo scout. The man with the blanket over his shoulders is an old chief, long since retired; the others are also Navajos. The woman with the baby in the cradle is the subject of one of the illustrations to a paper which has recently been accepted for publication by the *Popular Science Monthly*, of New York.

Near the house we have just described the Navajos built another some time during the spring of 1888, and it showed in its every detail a marked advance in house-building. It had but one room, to be sure, but it would accommodate a family comfortably, living as these people are accustomed to do indoors. All its sides were vertical and built regularly of heavy pieces of fine timber, the interstices among them being carefully sealed with a generous supply of mud plaster. The roof had a moderate pitch to it, and was built of boards nailed on to cross rafters, the whole being heavily covered over with mud. (Pl. XLIII.)

Small strips of board were used in other parts, as over the door and elsewhere, while some heavy pieces of timber supported the structure on the outside as struts. Then the door itself was a real door on hinges which they had obtained somewhere and hung with no little ingenuity. They had also secured an old condemned stove with its joints of pipe from the fort, and had set it up quite comfortable inside.

The floor was of earth, but level, hard, and dry, and here and there about the interior were evidences of a growing notion of comfort.

In this picture we have the family fully represented. The man is standing with his hand resting upon the door, his wife is seated outside weaving a belt, and at her side is her baby boy, seated upon a blanket of her own manufacture. The whole is a scene of marked naturalness and great interest, and one that rarely rewards the labors of the photographer among these people, who are very averse to having their pictures thus taken, and one must know them well and be liked by them before he can hope to succeed. It was months before they became in any way accustomed to my camera. A group of gamblers never would permit the exposure to be made; they invariably rolled themselves up in their blankets, and lay as quiet as so many armadillos until the enemy had departed. By tact and perseverance, however, a great many valuable negatives were procured by the writer, which depict all manner of scenes from the daily life of these Indians.

Nearly all the Government and other buildings at Wingate are built of adobe bricks, and these bricks are made in the immediate vicinity of the post by the Navajos, who are hired for the purpose.

Often groups of these Indians have watched the erection of a large two-storied house built with these bricks, and yet I have never heard any of them say that it was their intention to use the same kind of materials in building their own houses. There are two things which probably deter them from doing this, and from following the example of the white man, one of which is the dread of criticism, and the other a fear, perhaps, of exciting his jealousy and being prohibited the use of such material. Were they to attempt to erect houses of brick, I think they would doubtless succeed.